

CLAIMS:

1. A method of manufacturing a thermoelectric device (10) comprising a flexible foil (1) on which two groups (2, 3) of series-connected, strip-shaped parts (2A, 3A) are provided, where the materials chosen for the two groups of parts (2A, 3A) have a different thermoelectric coefficient, and said groups of parts are patterned such that the connections (4) between a part (2A) of one group (2) and another part (3A) of the other group (3) are alternately situated each time in one of two areas (G1, G2) of the foil (1) which are situated at a distance from each other, and where, following the provision of the strip-shaped parts (2A, 3A) on a substrate (5), the foil (1) is provided on the strip-shaped parts (2A, 3A), after which the substrate (5) is removed, characterized in that for the substrate (5) use is made of a rigid substrate (5), and prior to the removal of the rigid substrate (5), a rigid carrier plate (6) is attached onto the foil (1), which rigid carrier plate is removed again from the flexible foil (1) after the rigid substrate (5) has been removed.
2. A method as claimed in claim 1, characterized in that at least the greater part of the rigid substrate (5) is removed by means of grinding.
3. A method as claimed in claim 1 or 2, characterized in that the carrier plate (6) is attached to the foil (1) by means of an adhesive layer (7), and after the removal of the substrate (5), the foil (1) is removed by pulling it loose from the adhesive layer (7).
4. A method as claimed in claim 3, characterized in that for the material of the adhesive layer (7), 1,6 hexanedioldiacrylate (HDDA) is used as the adhesive, and for the material of the foil (1) use is made of a polyimide.
- 25 5. A method as claimed in claim 1, 2, 3 or 4, characterized in that for the substrate (5) use is made of a semiconductor substrate (5).

6. A method as claimed in claim 1, 2, 3, 4 or 5, characterized in that for the material of at least one (3) of the groups (2, 3) of strip-shaped parts (3A) use is made of a semiconductor material.
- 5 7. A method as claimed in any one of the preceding claims, characterized in that for the substrate (5) use is made of a monocrystalline silicon substrate (5) which is provided with an isolating layer (8) on which a polycrystalline silicon layer (55A) is deposited.
- 10 8. A method as claimed in any one of claims 1 through 6, characterized in that the substrate (5) is formed by the part of a monocrystalline silicon substrate (55) in which a buried oxide layer (8) is formed by means of an implantation of oxygen atoms, and which is situated below the oxide layer (8).
- 15 9. A method as claimed in any one of the preceding claims, characterized in that a number of the two series-connected groups (2, 3) of strip-shaped parts (2A, 3A) are arranged in parallel between two strip-shaped conductors (22, 23) which are formed on the foil (1).
- 20 10. A method as claimed in claim 9, characterized in that the foil (1) is folded or coiled, said folding or coiling taking place in such a manner that the connections (4) of the two interconnected groups (2, 3) of strip-shaped parts (2A, 3A) remain in two spaced apart positions (P1, P2).
- 25 11. A thermoelectric device (10) obtained by means of a method as claimed in any one of the preceding claims.